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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,901	03/10/2004	Fred A. Brown	917/198	3383
2101	7590	12/06/2006	EXAMINER	
BROMBERG & SUNSTEIN LLP			LAM, THANH	
125 SUMMER STREET			ART UNIT	
BOSTON, MA 02110-1618			PAPER NUMBER	
			2834	

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,901

Applicant(s)

BROWN, FRED A.

Examiner

Thanh Lam

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) * | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant should submit an argument regarding 112 rejection that “One of ordinary skill in the art would recognize that the inventor had possession of a support member that is movable at a different rate than the shaft “ the subject matters is not persuasive. Because the features “a movable support member (340) axially supporting the shaft, the movable support member being movable a rate different than that of the shaft.” do not support by the original specification. Therefore, one of ordinary skill in the art would not recognize that.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1,12,20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original specification of the application (page 6, the last line, and page 7, the first line) discloses, “Accordingly, during operation, the thrust washers 242 and 244 may rotate at a different rate than that of the shaft 223.”

While the amended subject matters introduce new matters as recited in claims 1,12,20 as follows: "a movable support member (340) axially supporting the shaft, the movable support member being movable a rate different than that of the shaft." the specification does not support the features as under-lines in the amendment.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Leuthold et al. (US 5,710,678).

Regarding claims 1, 20, Leuthold et al. disclose a motor comprising: a stator (50); a rotor having a shaft (20); a sleeve bearing (80) in contact with the rotor shaft, the sleeve bearing being fixedly secured to the stator; and a movable support member (160) axially supporting the shaft, the movable support member being movable relative to the shaft.

Regarding claims 2,13, Leuthold et al. disclose a housing at least in part encasing the stator, the housing forming a recess (where the ball 160 seat)for supporting the movable support member.

Regarding claims 3,17, Leuthold et al. disclose the movable support member is a spherical member.

Regarding claims 4,21, Leuthold et al. disclose the spherical member is a ball bearing.

Regarding claims 5, Leuthold et al. disclose the recess has a depth less than a radius (best shown in fig. 2A) of the spherical member.

Regarding claim 6, Leuthold et al. disclose a retaining washer about the shaft.

Regarding claims 7, Leuthold et al. disclose the shaft has a lower end, the retaining washer being located between the lower end of the shaft and the sleeve bearing.

Regarding claims 8, 23, Leuthold et al. disclose a rotor hub (22) coupled to the shaft, the rotor hub being spaced from the sleeve bearing.

Regarding claims 9, 16,24, Leuthold et al. disclose the rotor includes a rotor magnet (60), the rotor magnet being oriented with the stator to bias the rotor toward the movable support member.

Regarding claims 10, Leuthold et al. disclose the movable support member contacts the shaft when the motor is right side up and when the motor is upside down.

Regarding claims 11,19, 25, Leuthold et al. disclose the center of gravity of the rotor coincides with an opening in the sleeve bearing that accommodates the shaft.

Regarding claims 12, Leuthold et al. disclose a motor comprising: a stator; a rotor having a shaft that is rotatably coupled with the stator; and a movable support member

(160) supporting the weight of the rotor, the movable support member being movable relative to the shaft.

Regarding claims 14, Leuthold et al. disclose a sleeve bearing rotatably coupled with the shaft.

Regarding claims 15, Leuthold et al. disclose the rotor includes blades for moving air.

Regarding claims 18, Leuthold et al. disclose the stator has DC commutation circuitry.

Regarding claims 22, Leuthold et al. disclose a housing encasing the stator, the housing forming a recess for supporting the movable means for axially supporting.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 26-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leuthold et al. in view of Mortensen (US1866478).

Regarding claim 26, Leuthold et al. disclose all the aspect of the claimed invention except for the movable support member being rotatable to expose different regions of its surface to contact with the shaft.

Mortensen disclose the movable support member (H) being rotatable to expose different regions (the H ball is free moving) of its surface to contact with the shaft (c).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of shaft end and movable support member of Leuthold to accommodate the configured shaft and movable support member as taught by Mortensen in order provide the bearing creating a minimum of friction.

Regarding claims 27-36, the combination of Leuthold et al. and Mortensen disclose all the aspect of the claimed invention.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ferenbacher (US 6545381); Boutaghou (US 6222291); Oveyssi (US 6856492)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (571) 272-2026. The examiner can normally be reached on t-f 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh Lam
Primary Examiner
Art Unit 2834
